

Appl. No. 10/820,575
Office Action dated March 26, 2007.

In the Claims

Claims 1-18 [canceled].

19. [Previously Presented] An apparatus comprising:

a container configured to provide a subject material in a substantially static state;

and

a plurality of sensors individually configured to monitor turbidity of the subject material, wherein the sensors are individually configured to monitor the turbidity using particulate matter of the subject material, and wherein the particulate matter monitored by one of the sensors is different than the particulate matter monitored by another of the sensors.

20. [Previously Presented] The apparatus according to claim 19 wherein the sensors are provided at different positions relative to the container to monitor the turbidity of the subject material at a plurality of vertical positions of the container.

21. [Previously Presented] The apparatus according to claim 19 wherein the sensors individually comprise:

a source configured to emit electromagnetic energy towards the container; and

a receiver configured to receive at least some of the electromagnetic energy.

Claims 22-48 [canceled].

Appl. No. 10/820,575
Office Action dated March 28, 2007.

49. [Previously Presented] A turbidity monitoring method comprising:
providing a container;
providing subject material in a substantially static condition within the container;
monitoring the turbidity of the subject material at a predefined vertical position within the container without displacing the subject material;
generating a signal indicative of the turbidity of the subject material after the monitoring; and
wherein the subject material comprises a fluid and particulate matter within the fluid, and wherein the monitoring comprises monitoring settling of the particulate matter within the fluid.

50. [Previously Presented] The method according to claim 49 further comprising simultaneously monitoring the turbidity of the subject material at another predefined vertical position within the container.

51. [Previously Presented] The method according to claim 49 wherein the monitoring comprises:

emitting electromagnetic energy towards the subject material, the electromagnetic energy being not visible to humans; and
receiving at least some of the electromagnetic energy.

52. [Original] The method according to claim 49 further comprising rotating the subject material during the monitoring.

Appl. No. 10/820,575
Office Action dated March 26, 2007.

Claims 53-58 [canceled].

59. [Previously Presented] The method according to claim 49 wherein the monitoring comprises monitoring the turbidity of the subject material provided in the substantially static condition.

60. [Previously Presented] The apparatus according to claim 19 wherein the sensors individually monitor the turbidity of the subject material in the substantially static state.

Claims 61-62 [canceled].

63. [Previously Presented] The apparatus according to claim 19 further comprising a process chamber configured to receive and process a semiconductor workpiece using the subject material.

64. [Previously Presented] A sensor comprising:
a source configured to emit electromagnetic energy towards a subject material;
an initial receiver configured to receive at least some of the electromagnetic energy, the initial receiver being configured to generate a signal indicative of the turbidity of the subject material and responsive to the received electromagnetic energy;
and

Appl. No. 10/820,575
Office Action dated March 26, 2007.

a housing configured to align the source and initial receiver with respect to the subject material;

wherein the housing is configured to attach to a supply connection containing the subject material and detach from the supply connection without disruption of the flow of subject material within the supply connection.

65. [Previously Presented] The apparatus according to claim 19 wherein the subject material comprises a fluid and particulate matter within the fluid, and wherein the at least one sensor is configured to monitor settling of the particulate matter within the fluid.

66. [Previously Presented] The apparatus according to claim 19 wherein the subject material comprises a fluid and the particulate matter within the fluid, and wherein the sensors are individually configured to monitor a precipitation rate of the particulate matter within the fluid.

67. [Previously Presented] The apparatus according to claim 19 further comprising a computer coupled with the sensors and configured to access information regarding the turbidity of the subject material.

68. [Previously Presented] The apparatus according to claim 19 wherein the subject material comprises a fluid and the particulate matter within the fluid, and wherein the sensors are individually configured to monitor turbidity including monitoring

Appl. No. 10/820,575
Office Action dated March 28, 2007.

all particulate matter suspended in the fluid at a respective vertical position of the container corresponding to a vertical position of the respective sensor.

69. [Previously Presented] The apparatus according to claim 19 wherein the container containing the subject material is configured to rotate about an axis during the monitoring of turbidity by the sensors.

70. [Canceled].

71. [Previously Presented] The method according to claim 49 wherein the monitoring comprises monitoring precipitation rates of the particulate matter within the fluid.

72. [Previously Presented] The method according to claim 49 further comprising, using a computer, providing information regarding the turbidity of the subject material using the signal.

73. [Previously Presented] The method according to claim 49 wherein the monitoring comprises monitoring turbidity with respect to all particulate matter suspended in the fluid at the predefined vertical position within the container.

Appl. No. 10/820,575
Office Action dated March 26, 2007.

74. [Previously Presented] A turbidity monitoring method comprising:

- providing a container;
- providing subject material in a substantially static condition within the container;
- monitoring the turbidity of the subject material at a predefined vertical position within the container;
- rotating the container comprising the subject material about an axis during the monitoring;
- generating a signal indicative of the turbidity of the subject material after the monitoring; and
- wherein the subject material comprises a fluid and particulate matter within the fluid, and wherein the monitoring comprises monitoring settling of the particulate matter within the fluid.

75. [Previously Presented] The apparatus according to claim 19 wherein the particulate matter monitored by the one and other of the sensors are within different portions of the subject material.

76. [Previously Presented] The apparatus according to claim 19 wherein the particulate matter monitored by the one and other of the sensors are located at different vertical positions of the subject material.

Appl. No. 10/820,575
Office Action dated March 26, 2007.

77. [Previously Presented] The apparatus according to claim 19 further comprising a computer configured to calculate information regarding settling of particulate matter within the subject material using information from the one and other sensors.

78. [Previously Presented] The method according to claim 49 wherein the monitoring the turbidity comprises monitoring the turbidity of the subject material at a plurality of different vertical positions within the container using a plurality of sensors.

79. [Previously Presented] The method according to claim 78 wherein the monitoring comprises monitoring particulate matter of the subject material, and wherein the particulate matter monitored by one of the sensors is different than the particulate matter monitored by another of the sensors.

80. [Previously Presented] The method according to claim 78 further comprising wherein the monitoring of the settling of particulate matter within the fluid comprises monitoring using information from the plurality of sensors.

81. [Previously Presented] The method according to claim 50 wherein the particulate matter monitored at the predefined vertical position is different than the particulate matter monitored at the another predefined vertical position.